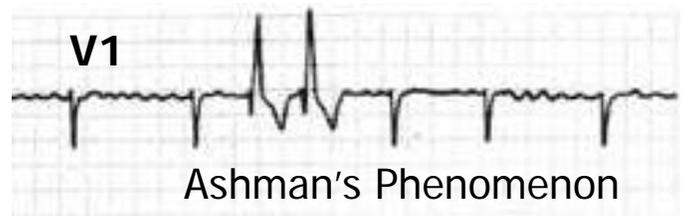


# 20. Atrial Fibrillation



## Priorities of Initial Treatment:

- If hemodynamically unstable, synchronized cardiovert immediately.
- If stable, first priority is **rate control**. Several agents:
- **β blockers**: IV Metoprolol. Oral Metoprolol, Atenolol. (Class I, highly recommended)
  - *BBs especially good for rate control w/ exercise.*
  - *Example Load-Metoprolol 5 mg IV q 5 minutes, until rate control and also oral dose*
- **CCBs**: IV Diltiazem. Oral Diltiazem, Verapamil. (Class IIa indication-Less effective)
  - *Example Load-0.25 mg/kg (20 mg is average) IV bolus 2 minutes.*
  - *If necessary, a second bolus 0.35 mg/kg (25 mg average)*
  - *Continuous IV infusion: 10 mg/hr (usually 5 to 15 mg/hr)*
- **Digoxin**: IV or oral. Slow and poorly effective, slows rate at rest but not with activity.
  - *Example Load-Digoxin 0.25 mg IV q 4h x 4 doses (Sole Agent Class III)*
- If < 48 hrs, can cardiovert w/o anticoagulation may require 1 mo AC afterwards due to atrial stunning.
- If > 48 hrs, requires 3-4 wks anticoagulation before cardioversion (DCCV or w/ drugs)
- Can TEE to clear left atrial appendages (LAA) for thrombi but still require one month anticoagulation.
- Short paroxysmal episodes that spontaneous convert, anti-coagulation indications unclear.
- Anti-arrhythmic based on underlying heart pathology

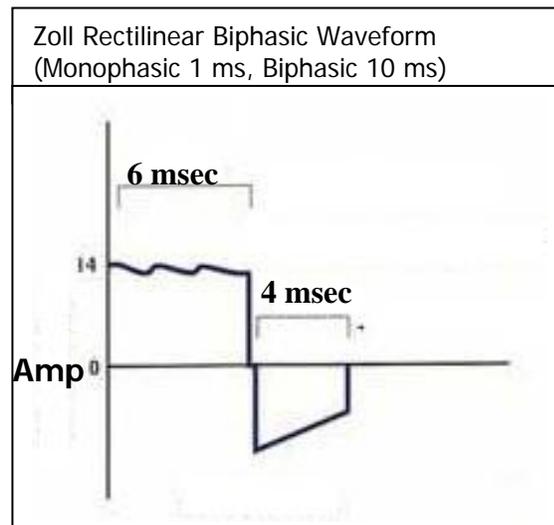
## Etiologies: Mnemonic: "PIRATES"

- P Pulmonary Disease
- I Ischemia
- R Rheumatic Heart Disease
- A Atrial Myxoma
- T Thyroid / Theophylline
- E Ethanol
- S Sepsis / Stimulants / Surgery

## Work up: 1. TSH

2. Recent echocardiogram
3. Consider exercise test

**Complications:** Stroke, congestive heart failure, cardiomyopathy, and even death.



**Ashman's Phenomenon** not a PVC's but an intermittent RBBB caused by a long, then short ventricular response. Conduction aberrant when stimulus falls during refractory period which is longer for right bundle than the left bundle

## Why Biphasic: (About half the Joules)

- Ventricular Fib Conversion: Monophasic 93%, Biphasic 99%
- Atrial Fib Conversion: Monophasic 70%, Biphasic 95%+

## Chemical Cardioversion:

1. Ibutilide (**CORVERT**) (Class III) Intravenous (~70% Effective)
  - 1mg for over 10 minutes **syringe pump**; repeat x 1, (Weight based < 60 Kg)
2. Dofetilide (**TIKOSYN**) (Class III) 500 mg po bid (make sure QTc< 500) (Rarely used)
3. Flecainide (**TAMBOCOR**) (Class 1c) without ischemic disease. ((Out patient 300 mg po PRN, 70% Effective))
4. Propafenone (**RHYTMOL**) (Class 1c) 600 mg po PRN (70% effective)
5. Amiodarone (Class III+) 600 mg po qd, 300 mg IV (~40% Conversion)
  - IV 150 mg over 10 min, then 1 mg/min x 300 mg
6. Sotalol or Quinidine can be effective

## Chemical Adjuvant for WPW with Atrial Fib:

Procainamide (Class 1a) 15 mg/kg IV over 30 min or 100 mg IV over 10 min or QRS Widens > 50%